

ANNEX
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AND
THE BOEING COMPANY
UNDER SPACE ACT UMBRELLA AGREEMENT
NO. SAA-RA-17-28204, DATED 9/13/2018 ANNEX NUMBER 2

ARTICLE 1. PURPOSE

This Annex shall be for the purpose of NASA JSC/WSTF to perform preparation of facilities, inspection and functional testing of up to five (5) each R40b type thrusters. Inspection and testing will be performed both prior to, and following hot-fire testing (hot-fire testing to be performed under a separate agreement). Upon completion of post hot-fire inspection and functional testing, up to five (5) each R40b thrusters will be shipped to Boeing.

The legal authority for this Annex, consistent with the Umbrella Agreement, is in accordance with the National Aeronautics and Space Act (51 U.S.C. § 20113(e)).

ARTICLE 2. RESPONSIBILITIES

A. NASA WSTF will use reasonable efforts to:

1. Designate a primary point of contact to work with Boeing.
2. Prepare facilities for performance of thruster functional testing.
3. Perform inspection and pre hot-fire functional testing, and provide data results, of up to five (5) each R40b, -5001 configuration thrusters.
4. Perform inspection and post hot-fire functional testing, and provide data results, of up to five (5) each R40b, -5001 configuration thrusters.
5. Upon completion of post hot-fire processing, ship up to five (5) each R40b, -5001 configuration thrusters to Boeing.
6. Provide end-item data packages for each thruster shipped to Boeing.

B. Partner will use reasonable efforts to:

1. Designate a point of contact to work directly with NASA WSTF primary point of contact.
2. Provide all requirements and necessary documentation relating to requested activities associated with this annex in a timeframe that supports the schedule agreed upon between the parties.
3. Support any NASA WSTF required safety or readiness reviews and any other schedule progress meetings between NASA WSTF and Boeing.

ARTICLE 3. SCHEDULE AND MILESTONES

The planned major milestones for the activities for this Annex defined in the "Responsibilities" Article are as follows:

Milestones defined are based on time from the date the SAA Annex is signed and funding is received by NASA WSTF. The milestones listed assume agreement is signed in a timeframe where no conflicting projects have been initiated during the time while the Annex was being reviewed and issued.	N/A
WSTF issues Task Order(s) for performance of efforts defined in this annex.	3-5 weeks after receipt of funding
Re-establish test systems (includes fabrication of any new test system hardware).	Approx. 4 months after issuing of Task Order
Update and/or issue test procedures.	Approx. 2 months after issuing of Task Order
Conduct TRR and address action items (if any)	Approx. 4.5 months after issuing of Task Order
Begin pre hot-fire functional testing	Approx. 2 weeks after TRR
Pre hot-fire functional testing duration.	Approx. 1 month
Complete post hot-fire functional testing. (Assumes thrusters are hot-fire at a rate of 2/week)	Approx. 6 weeks after completion of first hot-fire
Prepare end-item data packages.	Approx. 4-6 weeks after post hot-fire functional testing
Package and ship thrusters.	Approx. 2 weeks after completion of EIDPs
Take test systems off-line and close-out all paper.	1-2 months after completion of post hot-fire functional testing

ARTICLE 4. FINANCIAL OBLIGATIONS

A. Partner agrees to reimburse NASA an estimated cost of \$611,034.32 for NASA to carry out its responsibilities under this Annex.
Each payment shall be marked with Johnson Space Center, WSTF, SAA-RA-17-28204, Annex 2.

B. NASA will not provide services or incur costs beyond the current funding. Although NASA has made a good faith effort to accurately estimate its costs, it is understood that NASA provides no assurance that the proposed effort under this Annex will be accomplished for the estimated amount. Should the effort cost more than the estimate, Partner will be advised by NASA as soon as possible. Partner shall pay all costs incurred and have the option of canceling the remaining effort, or providing additional funding in order to continue the proposed effort under the revised estimate. Should this Annex be terminated, or the effort completed at a cost less than the agreed-to estimated cost, NASA shall account for any unspent funds within one year after completion of all effort under this Annex, and promptly thereafter, at Partner's option return any unspent funds to Partner or apply any such unspent funds to other activities under the Umbrella Agreement.

ARTICLE 5. INTELLECTUAL PROPERTY RIGHTS - DATA RIGHTS

A. Data produced under this Annex which is subject to paragraph C. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement will be protected for the period of five years.

B. Under paragraph H. of the Intellectual Property Rights - Data Rights Article of the Umbrella Agreement, Disclosing Party provides the following Data to Receiving Party. The lists below may not be comprehensive, are subject to change, and do not supersede any restrictive notice on the Data provided.

1. Background Data:

The Disclosing Party's Background Data, if any, will be identified in a separate technical document.

2. Third Party Proprietary Data:

The Disclosing Party's Third Party Proprietary Data, if any, will be identified in a separate technical document.

3. Controlled Government Data:

The Disclosing Party's Controlled Government Data, if any, will be identified in a separate technical document.

4. The following software and related Data will be provided to Partner under a separate Software Usage Agreement:

None

ARTICLE 6. TERM OF ANNEX

This Annex becomes effective upon the date of the last signature below ("Effective Date") and shall remain in effect until the completion of all obligations of both Parties hereto, or two years from the Effective Date, whichever comes first, unless such term exceeds the duration of the Umbrella Agreement. The term of this Annex shall not exceed the term of the Umbrella Agreement. The Annex automatically expires upon the expiration of the Umbrella Agreement.

ARTICLE 7. RIGHT TO TERMINATE

Either Party may unilaterally terminate this Annex by providing thirty (30) calendar days written notice to the other Party.

ARTICLE 8. POINTS OF CONTACT

The following personnel are designated as the Points of Contact between the Parties in the performance of this Annex.

Management Points of Contact

NASA White Sands Test Facility

Robert M. Cort
Manager, NASA JSC White Sands Test Facility
Mail Stop: 100:112A
12600 NASA Road
Las Cruces, NM 88012
Phone: 575-524-5771
robert.m.cort@nasa.gov

THE BOEING COMPANY

Jeffrey C. Persh
Contracts Representative
Mail Suite: W-S50-X403
2060 East Imperial Highway
El Segundo, CA 90245-3507
Phone: 310-416-2308
jeffrey.c.persh@boeing.com

Technical Points of Contact

NASA White Sands Test Facility

Nicholas L. Buntain
Project Manager, Technical Services Office
Mail Suite: 200:NHB3
12600 NASA Road
Las Cruces, NM 88012
Phone: 575-524-5570
nicholas.l.buntain@nasa.gov

THE BOEING COMPANY

Tim Price
Propulsion Engineering
Mail Suite: Mail Stop: W-S25-D603
2060 East Imperial Highway
El Segundo, CA 90245-3507
Phone: 657-237-0436
Timothy.M.Price@boeing.com

ARTICLE 9. MODIFICATIONS

Any modification to this Annex shall be executed, in writing, and signed by an authorized representative of NASA and the Partner. Modification of an Annex does not modify the terms of the Umbrella Agreement.

ARTICLE 10. SIGNATORY AUTHORITY

The signatories to this Annex covenant and warrant that they have authority to execute this Annex. By signing below, the undersigned agrees to the above terms and conditions.

NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION
WHITE SANDS TEST FACILITY

THE BOEING COMPANY

BY:_____

Robert Cort
Manager, White Sands Test Facility

BY:_____

Jeffery C. Persh
Contracts Representative

DATE:_____

DATE:_____